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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,739	09/27/2000	Brian G. Scrivens	P-5015	7708

7590 03/01/2004

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EXAMINER

COLE, MONIQUE T

ART UNIT	PAPER NUMBER
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1743

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 09/670,739	Applicant(s) SCRIVENS ET AL.	
	Examiner Monique T. Cole	Art Unit 1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 9-12 and 15-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-8, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,454,945 to Weigl et al. (herein referred to as "Weigl").

Weigl teaches a microfluidic system comprising a plurality of inlets; means for controlling fluid flow through at least one of said inlets connected with said inlet; a laminar flow channel in fluid communication with said inlets; at least three outlets in fluid communication with said laminar flow channel; and means for controlling fluid flow through at least one of said outlets connected with said outlet (col. 7, lines 15-23). Detection and analysis is done by optical means (col. 8, lines 34-35). The apparatus may include a transparent cover plate (col. 16, lines 5-6). The input or sample stream may be any stream containing particles of the same or different size, for example blood (col. 9, lines 7-8). In a preferred embodiment, when the sample stream is whole blood, small ions diffuse rapidly across the channel, whereas larger particles diffuse slowly (col. 9, lines 16-24). The inlets need only be sized large enough to conduct the streams of parallel laminar flow (col. 10, lines 50-52). The width and depth of the inlet and outlet channels must be large enough to allow the passage of the undesired particles (col. 10, lines 63-64).

Weigl differs from the instantly claimed invention in that it separates smaller particles from the sample stream instead of larger particles. However, Weigel teaches that the channels included therein may be modified according to the preference of the person using the device.

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"The inlets and outlets may be as long, deep and wide as required for the system of which they are a part." (col. 10, lines 57-59). Thus, given this disclosure, it would have been obvious to one having ordinary skill in the art to modify the channels taught in Weigl to isolate larger particles in lieu of smaller particles if the desired end result was to capture larger particles.

Response to Arguments

3. Applicant's arguments filed 12/4/2003 have been fully considered but they are not persuasive.

Applicant has argued "it would not have been obvious to utilize the teachings of Weigl to use output channels with diameters much larger than particles of interest in order to concentrate such particles." However, Applicant's attention is directed to col. 39, lines 55-57, where it is taught that "channel cells of this invention and the channels therein can be sized as determined by the size of the particles desired to be detected or separated." Thus, it would have been obvious to one of ordinary skill in the art to modify the device of Weigl to concentrate whatever size particles of interest to the user.

The Examiner pointed out Figure 4 in the previous Office Action as merely being exemplary of Weigl's varying microchannel sizing. However, this was not meant to be entirely representative of the device taught by Weigl. Thus, Applicant's statements concerning the deficiencies of Figure 4 do not overcome the applied reference.

Allowable Subject Matter

4. Claims 9-12 & 15-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or suggest a method for obtaining a liquid sample having an increased cellular or particulate concentration for optical examination wherein notches are utilized to separate larger desired particles from smaller particles.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique T. Cole whose telephone number is 571-272-1255. The examiner can normally be reached on Monday-Thursday from 6:30 A.M. to 4:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monique T. Cole
Examiner
Art Unit 1743

MC *MC*


Jill Warden
Supervisory Patent Examiner
Technology Center 1700